IN THE DRAWINGS:

The attached replacement sheets contain formal drawings that include changes to Figures 4A and 5. These sheets replace the originally filed sheets containing the same figures.

Attachment: 2 replacement sheets and 2 sheets illustrating the changes to Figures 4A and 5 of the original drawings.

REMARKS

Applicant is in receipt of the Office Action mailed December 16, 2005. Claims 1, 7, 10, and 19 have been rejected. Claims 11-18 and 20 have been allowed. Claims 2-6, 8, and 9 were objected to. Claims 1-20 are pending in the Application.

Drawings:

The drawings were objected to because of typographical errors in Figures 4A and 5. The typographical errors have been corrected according to Examiner's comments, and replacement sheets containing the corrected figures have been attached. Applicant therefore respectfully requests removal of the objection to the drawings.

35 U.S.C. § 112 Rejection:

Claims 7 and 19 were rejected under 35 U.S.C 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 7 and 19 have been amended to correct the antecedent issues noted by Examiner. Applicant therefore respectfully requests removal of the 35 U.S.C. § 112 rejection.

35 U.S.C. § 102 Rejection:

Claims 1 and 10 were rejected under 35 U.S.C 102(b) as being anticipated by Suzuki, U.S. Pat. No. 5,101,199. Applicant respectfully traverses this rejection. Applicant has amended claim 1 to more clearly and distinctly claim the subject matter which Applicant regards as the invention. **The cited reference does not teach or suggest all of the elements of amended claim 1.**

Amended independent claim 1 recites:

A method for handling an interrupt, the method comprising:

receiving an interrupt request corresponding to a particular interrupt;

upon receiving the interrupt request, substituting a vector corresponding to a group of interrupts with a vector corresponding to the particular interrupt, wherein said substituting does not require performing a polling operation; and

jumping to a service routine corresponding to the particular interrupt responsive to said substituting.

As indicated in Figures 2 and 5, in the system disclosed by Suzuki, the incoming interrupt request is applied to an internal controller, which controls the polling operating of a control unit (col. 6, lines 54-65). In the system of Suzuki, when an interrupt request to a control occurs, the control unit polls a plurality of interrupt request terminal interfaces to locate which of the interrupt request terminal interfaces has generated the interrupt request (Abstract). Subsequently, when the internal controller receives from the vector determination circuit the data indicative of the fact that the second vector data is determined, it starts its interrupt request generator to cause the interrupt request generator to generate an interrupt request IRQ' and reports to the CPU the fact that the generated source of request (the terminal interface which has output the interrupt request IRQ) has been located (col. 8, lines 29-37). The CPU receives the report and accesses the vector register to read the vector data, accesses the address register to read the address data, then perform the predetermined interrupting operation on the located terminal interface (col. 8, lines 38-43).

As even the title of Suzuki suggests (Polling Method and Apparatus), in the system disclosed by Suzuki, a polling operation is performed to determine which of the interrupt request terminal interfaces has generated the interrupt request, while in contrast, claim 1 recites substituting a vector corresponding to a group of interrupts with a vector corresponding to the particular interrupt upon receiving the interrupt request, wherein said substituting does not require performing a polling operation. Furthermore, claim 1 also recites jumping to a service routine corresponding to the particular interrupt responsive to said substituting, whereas in the system of Suzuki, an interrupt request IRQ' different from the received interrupt request IRQ is first asserted, in response to

which the vector register and address register are accessed, and the interrupting operation is performed (Fig. 5 and col. 8 lines 29-43).

For at least these reasons, Applicant submits that the combinations of features recited in amended claim 1 are not anticipated by Suzuki, and are neither suggested by nor inherent in Suzuki, since the system disclosed by Suzuki is based on performing a polling operation. Accordingly, Applicant respectfully requests removal of the 35 U.S.C. § 102(b) rejection. Because claim 10 depends on claim 1, and claim 1 was shown to be allowable, claim 10 is also allowable for at least the reasons given above.

Allowable Subject Matter:

Claims 2-9 were objected to as being dependent upon a rejected base claim, but were deemed allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 11-18 and 20 were allowed.

Applicant appreciates the allowable subject matter. Regarding claims 2-9, because claim 1 was shown to be allowable, and claims 2-9 depend on claim 1, claims 2-9 are also allowable for at least the reasons given above.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5707-04500/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☒ Original Figures 4A and 5

☒ Replacement Figures 4A and 5

Respectfully submitted,

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Date: _____JCH/TAK

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Addr	Instruction	Bytes	Cycles	
53	LJMP (IRQ0JT+offset)	3	4	(IRQ4JT+offset) is set by the IRQ state machine based on the active sub-IRQ4 interrupt
54	-			
55	-			
56	-			
57	-			
58	-			
59	-			
5A	-	-	-	

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Addr	Instruction	Bytes	Cycles	Comment
IRQ4JT				IRQ4 Jump Table The location of this table is fixed by hardware and cannot be moved.
+00	LJMP IRQ4.0	3	4	IRQ4 Bit 0 service routine
+04	LJMP IRQ4.1	3	4	IRQ4 Bit 1 service routine
+08	LJMP IRQ4.2	3	4	IRQ4 Bit 2 service routine
+0C	LJMP IRQ4.3	3	4	IRQ4 Bit 3 service routine
+10	LJMP IRQ4.4	3	4	IRQ4 Bit 4 service routine
+14	LJMP IRQ4.5	3	4	IRQ4 Bit 5 service routine
+18	LJMP IRQ4.6	3	4	IRQ4 Bit 6 service routine
+1C	LJMP IRQ4.7	3	4	IRQ4 Bit 7 service routine
+20	LJMP IRQ none	3	4	No IRQ4's are active-go to a null routine. This could have just a RETI or other processing.

FIG. 4A

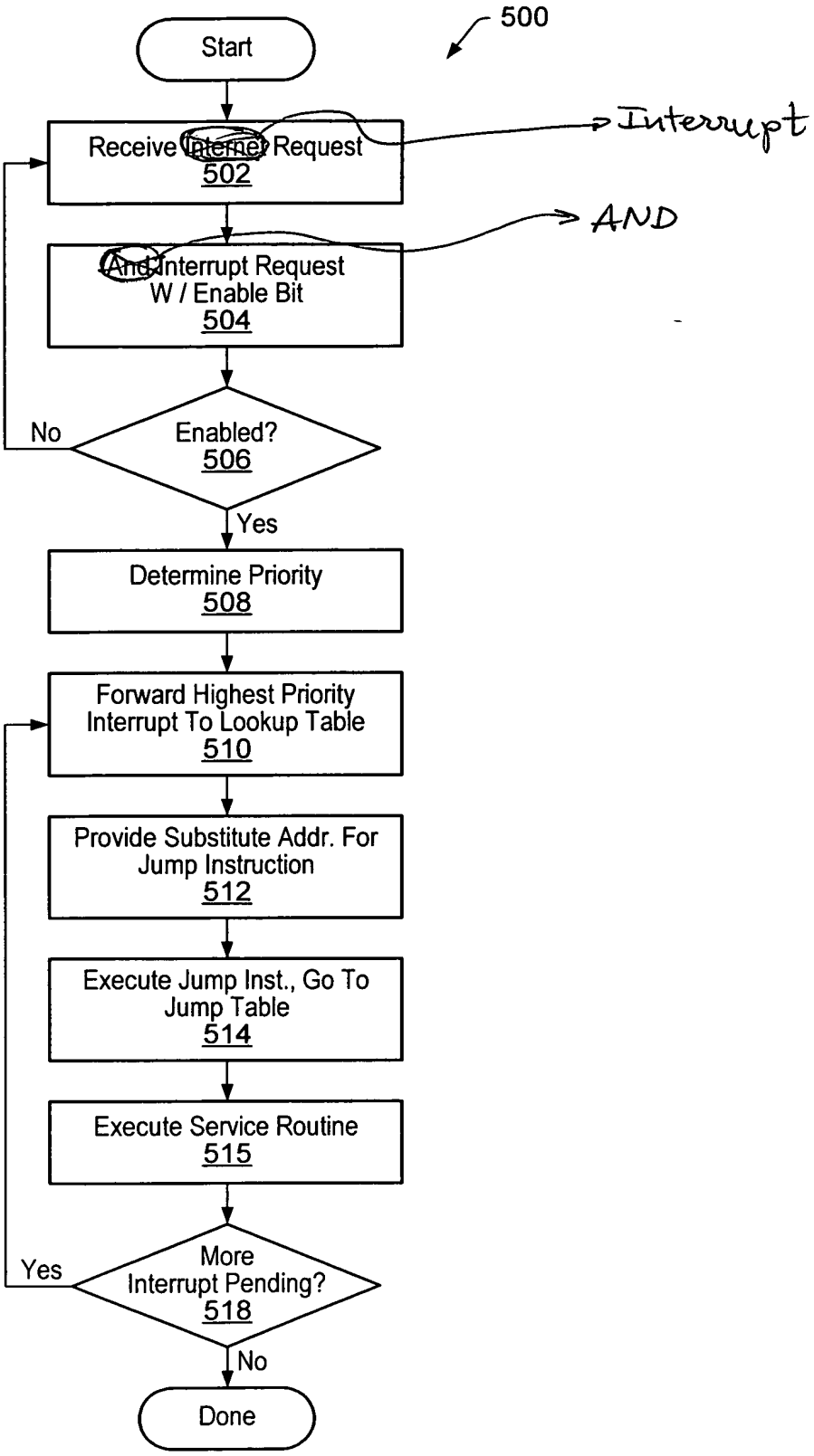
500
Start
Receive Interrupt Request
502
Interrupt
And Interrupt Request
W / Enable Bit
504
AND
No
Enabled?
506
Yes
Determine Priority
508
Forward Highest Priority
Interrupt To Lookup Table
510
Provide Substitute Addr. For
Jump Instruction
512
Execute Jump Inst., Go To
Jump Table
514
Execute Service Routine
515
Yes
More
Interrupt Pending?
518
No
Done

FIG. 5